UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION X

IN THE MATTER OF:	)	
	)	
	)	
	)	U.S. EPA DOCKET NO.
United States Department of the Navy,	)	RCRA-10-2015-0020
	)	
	)	
Respondent	)	Proceeding under Section 7003(a) of the
	)	Resource Conservation and Recovery Act,
Gorst Creek Landfill,	)	FINAL ADMINISTRATIVE ORDER
Port Orchard, Washington	)	as amended, 42 U.S.C. § 6973(a)
CERCLIS NO. WAN001002414,	)	
	)	
Facility	)	

I. JURISDICTION

1. This Administrative Order ("Order") is issued to the United States Department of the Navy ("Respondent") by the United States Environmental Protection Agency ("EPA") pursuant to the authorities vested in the Administrator of EPA by Section 7003 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act and by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6901 *et seq*. (hereinafter collectively referred to as "RCRA"). The authority vested in the EPA Administrator has been delegated to the Regional Administrator of EPA, Region 10, who in turn has redelegated this authority to the Director of the Office of Environmental Cleanup, Region 10. Notice of this Order has been provided to the state of Washington through the Department of Ecology ("Ecology"), as required by Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).

II. PARTIES BOUND

2. This Order shall apply to and be binding upon Respondent, its agents and assigns, and upon all other persons and entities who are under the direct or indirect control of Respondent.

3. Respondent shall provide a copy of this Order to all of its supervisory personnel, contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) calendar days of the effective date of this Order or date of such retention, whichever is later. Respondent shall condition all contracts with

the aforementioned on compliance with the terms and conditions of this Order. Respondent shall instruct all supervisory personnel, contractors, laboratories, and consultants retained to conduct or monitor any work pursuant to this Order to perform such work in accordance with the requirements of this Order.

III. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Order that are defined in Section 1004 of RCRA, 42 U.S.C. § 6903, shall have the meaning assigned therein. In addition, whenever the terms listed below are used in this Order or the appendices attached hereto, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 to 9675.

b. "Day" shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business on the next working day.

c. "Effective Date" shall mean the effective date of this Order as provided in Section XXV (Effective Date) herein.

d. "EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies and instrumentalities.

e. "Site" shall mean the property located at or around 4275 State Highway 3 Southwest in Port Orchard, Washington, identified by Kitsap County Tax Assessor as parcel number 012301-4-022-1005.

f. "Order" shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of a conflict between this Order and any appendix, the terms of this Order shall control.

g. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral or an upper or lowercase letter.

h. "RCRA" shall mean the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq*.

i. "Respondent" shall mean the United States Department of the Navy.

j. "Response Action" shall mean all activities required to be performed by Respondent under this Order.

k. "Section" shall mean a portion of this Order identified by a Roman numeral.

IV. FINDINGS OF FACT

5. The Gorst Creek Landfill ("Site") is located at or around 4275 State Highway 3 Southwest, in Port Orchard, Washington and is identified by the Kitsap County Tax Assessor as parcel number 012301-4-022-1005.

6. The Site includes a triangular waste disposal area or landfill of approximately 5.7 acres located in a ravine through which Gorst Creek flows ("Gorst Creek Ravine"). The landfill in the Gorst Creek Ravine is approximately 700 feet long, reaches depths of approximately 60 to 80 feet, and is estimated to contain 150,000 cubic yards of waste. To create the landfill, Gorst Creek was channeled through a 24-inch corrugated steel culvert placed on the floor of the ravine. Between approximately 1968 and 1989, the ravine was filled with waste disposed of on top of the culvert. A depiction of the Site is appended to this Order as Appendix A and incorporated herein by reference.

7. Washington State Highway 3 is located adjacent to the Site approximately 100 yards downstream of the waste disposal area. As Gorst Creek exits the culvert beneath the landfill it flows under State Highway 3 and then approximately four miles downstream to Sinclair Inlet in the Puget Sound. Between the Site and its confluence with Sinclair Inlet, Gorst Creek passes through Gold Mountain Golf Course located across State Highway 3, flows through the wellhead protection zone for the City of Bremerton's municipal wells 15 and 17 located 0.5 miles downstream, and supports the Suquamish Tribe's Chinook salmon hatchery operations located 2.8 miles downstream. In addition, the City of Bremerton maintains a well, BR-11, to monitor groundwater quality that is located approximately 0.15 miles northeast of the Site. A population of approximately 1,027 people reside within one-mile of the Site. Washington State Highway 3 is one of two major access roads to the Kitsap Peninsula, with an annual average daily traffic volume of 44,000 vehicles for the portion of the highway that bypasses the Site.

8. In 1964, Ames Auto Wrecking, Inc. ("AAW") acquired the Site and applied for a permit to dispose of waste within Gorst Creek Ravine. The Kitsap County Health District ("KCHD") rejected AAW's permit application due in part to concern that waste disposal in the ravine would adversely impact Gorst Creek which is part of the municipal water source for the City of Bremerton. To address KCHD's concerns, AAW placed the 24-inch steel culvert at the base of the ravine in order to maintain the flow of Gorst Creek as waste is disposed in the ravine on top of the culvert. In 1968, AAW reapplied for a waste disposal permit but its application was rejected by KCHD due to concerns that the Site was too close to residential areas and Washington State Highway 3 and that the culvert would not be able to withstand the weight of waste material to be disposed in the ravine.

9. Despite not having a permit, AAW entered into a contract with Respondent, identified as contract number N62476-69-C-0181, to dispose of waste generated at Puget Sound Naval Shipyard ("PSNS") at the Site for a period of one-year commencing on July 1, 1969. The contract specification developed by Respondent estimated the total annual volume of waste to be disposed under the contract at 124,955 cubic yards, and identified the types and monthly

volumes of waste to be disposed as industrial trash (6,000 cubic yards), contaminated garbage (50 cubic yards), timber and logs (1,000 cubic yards), oils, tars and chemicals (50 cubic yards), and sawdust (650 cubic yards). The contract specification identified certain types of waste to be disposed, but also provided that contracted services would include the disposal of all waste that Respondent transported to the Site from PSNS.

10. From approximately July 1, 1969 until June 30, 1970, Respondent generated waste at the PSNS and transported the waste to the Site for disposal in the Gorst Creek Ravine landfill. At all times that waste from the PSNS was transported to and disposed of at the Site under contract number N62467-69-C-0181, AAW did not have a permit to dispose of waste at the Site.

11. On November 13, 1969, Kitsap County filed a complaint seeking to permanently enjoin AAW from operating an unpermitted landfill at the Site. Subsequent to the filing of the complaint, in a letter dated December 1, 1969, United States Senator Henry M. Jackson requested that Respondent assist Kitsap County with its efforts to close the unpermitted landfill by canceling contract number N62467-69-C-0181. In a response to Senator Jackson dated December 22, 1969, Respondent stated that the contract required AAW to comply with applicable state and local laws, and that enforcement of such laws were the responsibility of state and local authorities. The waste disposal contract between AAW and Respondent ended on June 30, 1970, and was not renewed.

12. On June 22, 1970, Kitsap County and AAW reached a settlement to the lawsuit requiring AAW to submit a new permit application. KCHD subsequently issued a permit for operation of the landfill for public waste and demolition debris. Between 1970 and 1989, the landfill accepted public waste primarily from local residents. Gorst Creek Ravine is estimated to contain 150,000 cubic yards of waste, of which Respondent may be responsible for generating up to 125,000 cubic yards of this waste or nearly 85% of the total volume. Certain waste items found at the landfill are clearly identified as military in origin including portable lead acid batteries (marked as “Class 2V-SBP-20AH U.S. Navy”), military issue flashlights, and paper waste marked with “Department of the Navy Bureau of Ships.” Other than Respondent no significant single source generator of waste to the landfill has been identified.

13. In 1989, KCHD issued an order shutting down landfill operations at the Site for failing to comply with state and local regulations. The Site was subsequently abandoned and no actions were taken to close the landfill in accordance with state or federal requirements, including requirements at 40 C.F.R. Part 258, Subpart F which were promulgated to protect against the release of hazardous constituents from landfills into the environment.

14. On March 19, 1997, it rained 7 inches in a 24-hour period. The precipitation increased the flow of Gorst Creek and resulted in the impoundment of a significant volume of water upstream of the culvert passage beneath the landfill. The impoundment of Gorst Creek caused surface water to bypass the culvert and flood through and over the top of the landfill, causing the downstream slope of the landfill to erode and slide into Gorst Creek. The landfill slide dispersed waste material in and around the upstream entrance to the culvert conveying Gorst Creek beneath State Highway 3, and up to a half mile downstream. In addition, the impoundment of water

upstream of the landfill elevated the water level of Gorst Creek and resulted in the saturation of landfill debris. Seven days after the landfill slide, on March 26, 1997, a groundwater sample collected from the City of Bremerton monitoring well BR-11 detected elevated concentrations of cadmium at 42.7 micrograms per liter (µg/L), copper at 3.0 µg/L, and zinc at 75 µg/L.

15. Following an inspection of the Site, Ecology, Washington State Department of Transportation ("WashDOT") and KCHD met to discuss Site conditions on April 7, 1997, and concluded that the instability of the landfill and potential for additional slope failure presented an imminent threat to public health, safety and the environment. The Agencies identified the three main areas of immediate concern resulting from the instability of the landfill as potential threats and damage to State Highway 3, potential impacts to downstream well fields including the City of Bremerton's wells, and adverse impact to fish habitat from continued sedimentation and debris.

16. Following the Site visit on April 7, 1997, Hong West & Associates, Inc. completed a geotechnical evaluation of the landfill for WashDOT dated April 22, 1997. The geotechnical evaluation was conducted to address WashDOT concerns that future landslides from the landfill would wash waste debris into and against the culvert under State Highway 3, blocking stream flow and causing flooding that could impact the highway and erosion that could threaten the stability of the highway embankment. The geotechnical evaluation documented erosional gullies at the top of the downstream landfill slope and water seepage at the base of the landfill. Based on this information, the evaluation concluded that heavy storm events cause a combination of overland flow down the landfill slope and stream flow through the landfill likely due to a partially or completely blocked culvert. The evaluation concluded that these conditions could lead to future large-scale landslide events. As an interim measure to protect State Highway 3 until a permanent solution to the landfill slope instability could be implemented, the geotechnical evaluation recommended the construction of two rip-rap catchment berms downstream of the Site to catch waste from the landfill before it reached the highway culvert. WashDOT constructed the recommended two berms in May 1997.

17. In April 1997, Respondent contracted with Foster Wheeler Environmental Corporation to conduct an inspection of the Site. The inspection report identified various waste debris downstream of the landfill including two 500-gallon tanks, medical waste, lead acid batteries, automobile waste, scrap metal, various five-gallon containers, and several uprooted trees in the center of the slope failure. The report further confirmed that the downstream slope of the landfill was continuing to erode into Gorst Creek and concluded that the structural instability of the landfill would lead to further erosion of the landfill and releases of waste material to the downstream environment. Specifically, Foster Wheeler concluded that, in its current condition, the landfill slope will continue to slide and send additional waste debris downstream, further undercutting of the landfill slope and exacerbating the slope failure. The Foster Wheeler inspection also confirmed the conclusions of the WashDOT geotechnical evaluation that continued landfill slope failure would be detrimental to State Highway 3. In a letter dated May 28, 1998, Respondent notified Ecology that it would cooperate with efforts to address conditions at the Site.

18. In October 2000, Hart Crowser, Inc. completed a Site Hazard Assessment (SHA) for Respondent that concluded the physical instability of the landfill and culvert flow capacity created a high potential for future slope failures which could send waste debris into the downstream environment and which may present a threat to State Highway 3. Specifically, the SHA documented evidence of debris flow and surface erosion resulting in over-steepened slopes on the downstream face of the landfill. The SHA concluded that the over-steepened slopes are particularly susceptible to surface erosion and "blow-out" events. The SHA also determined that if the culvert beneath the landfill was broken or truncated, it would further exacerbate the instability of the landfill.

19. After completing its Site Hazard Assessment, Respondent commenced planning of a remedial investigation and feasibility study. During the planning process Ecology requested that the Site be evaluated for future residential use instead of the future commercial use proposed by Respondent. This request to change the future use of the Site, and the associated response action needed to achieve the cleanup levels associated with this future use, led to a disagreement between Ecology and Respondent. As a result, Respondent unilaterally terminated its involvement in addressing conditions at the Site in early 2001. In February 2001, Ecology placed the Site on its Hazardous Sites List and assigned it the highest priority ranking.

20. Heavy rainfall in January 2002 again caused Gorst Creek to impound upstream of the landfill and to flood through and over top of the landfill. The resulting flood washed waste from the landfill downstream and destroyed the uppermost rip-rap catchment berm constructed by WashDOT to protect State Highway 3 following the 1997 slope failure.

21. Following the 2002 flood event and the Respondent's decision to end its participation at the Site, Ecology and KCHD referred the Site to EPA and requested assistance to address Site conditions. EPA conducted a preliminary assessment and inspection of the Site on January 28, 2003. At the time of the inspection, Gorst Creek was impounded upstream of the landfill a distance of approximately 400 feet with standing water reaching depths of up to 30 feet. The EPA deployed a video camera into the culvert and confirmed that the culvert had collapsed beneath the weight of the landfill approximately 450 feet upstream of the culvert outflow. A second culvert collapse was observed approximately 20 feet downstream of the culvert inflow. EPA was unable to inspect the condition of the approximately 220 feet of culvert between the two observed collapsed areas.

22. In November 2003, EPA returned to collect onsite samples from soil, groundwater, surface water, sediment, and six borehole samples of the landfill at depths of four to twenty feet. EPA also collected three additional offsite sediment samples in Gorst Creek at locations downstream of the Site. Onsite sampling results identified the following substances at concentrations that exceeded health-based screening levels: two polychlorinated biphenyls ("PCBs") – Aroclor-1242 and Aroclor 1254; six pesticides – aldrin, alpha-chlordane, dieldrin, endrine, keton, gamma-chlordane, and heptachlor; two metals – arsenic and lead; and four semi-volatile organic compounds ("SVOCs") – 2-methylnaphthalene, napthalene, phenanthrene and bis[2-ehtylhexyl]phthalate. Downstream offsite sediment samples detected concentrations of dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethylene (DDE), PCBs and

copper at levels exceeding federal ecological screening levels. Exposure to these substances may present an actual or potential harm to human health or the environment.

23. In June 2004, EPA completed an Integrated Assessment ("IA") documenting the results of its 2003 sampling and site investigation. The IA concluded from sampling data that the landfill contains significant concentrations of pesticides, PCBs, metals and SVOCs, and that the collapsed culvert and resulting flood events provide a pathway for the release of these substances to Gorst Creek and the downstream environment with the potential to impact nearby receptors including groundwater wells, sport fisheries and the Suquamish Tribe fish hatchery.

24. The Washington Department of Fish and Wildlife ("WDFW") has identified Gorst Creek as a migratory corridor and as habitat for coho salmon (*Oncorhynchus kisutch*), listed as a threatened species under the Endangered Species Act, and for coast-resident cutthroat trout (*O. clarki*), a state of Washington priority species. Cutthroat trout have been observed in Gorst Creek immediately below the Site. According to the National Marine Fisheries Service, because Gorst Creek is a tributary to the Puget Sound there is also the potential for occurrence of other federally listed species including Puget Sound Chinook salmon (*O. tshawytscha*) and Puget Sound steelhead (*O. mykiss*).

25. The WDFW assessed the impact of the landfill to fish resources, including threatened and endangered species. WDFW determined that the landfill slope failure resulted in impacts up to a half-mile downstream. These impacts included dispersion of waste debris and heavy sand and silt loading to the downstream reaches of Gorst Creek. Sand and silt loading filled areas of wetlands associated with Gorst Creek and caused the Creek to braid into several channels that were created by wide and thick sand and gravel deposits. Downstream of the Site waste material was observed to have concentrated into debris piles which further affected the natural flow of Gorst Creek.

26. The WDFW assessment concluded that future landfill slides could impact fish resources by causing silting and sedimentation of spawning and rearing habitat. Additional sedimentation and silting loads would also increase water column turbidity. Heavy or prolonged periods of turbidity can kill fish by clogging or abrading gills or by impairing feeding ability. Contaminants identified at and immediately downstream of the Site, including heavy metals and SVOCs, can change water pH levels and alter water chemistry could impact juvenile salmon as they undergo body chemistry changes to prepare for life in saltwater. Finally, WDFW raised concern that small pieces of waste debris could be ingested by fish.

27. Suquamish Tribe is a federally recognized Indian Tribe with rights under the 1855 Treaty of Point Elliot to fish and gather shellfish at usual and accustomed areas in the Puget Sound which include the downstream segment of Gorst Creek and Sinclair Inlet. The Suquamish Tribe also operates a Chinook salmon hatchery located on Gorst Creek approximately 3 miles downstream of the Site. Due to the potential impact of the Site on the Suquamish Tribe's usual and accustomed fishing areas and fish hatchery operation the Tribe requested government-to-government consultation. In consultation, the Suquamish asserted that the landfill culvert is impassable to fish at all life stages and does not provide for natural ecological function. The

Tribe supports an action to remove the landfill from Gorst Creek Ravine or to reroute Gorst Creek around the landfill to restore migratory corridors and fish habitat.

28. In December 2009, EPA sent a letter to Respondent requesting assistance in responding to conditions at the Site that present a danger to public health, welfare and the environment. On February 2, 2010, representatives of EPA and Respondent discussed the December 2009 letter by phone, with EPA agreeing to share documents in its possession which indicated that Respondent disposed of waste at the Site. EPA provided this documentation to Respondent with a letter dated February 10, 2010, which reiterated EPA's request that Respondent assist in responding to conditions at the Site. In an email dated September 23, 2010, Respondent informed EPA that it would not assist or participate in a response action at the Site and claimed that its liability had not been established.

29. In a letter dated March 22, 2011, EPA notified Respondent that it was preparing an Engineering Evaluation and Cost Analysis ("EE/CA") and again requested Respondent's participation at the Site but received no response. As part of the EE/CA, EPA conducted additional soil, sediment and groundwater sampling in July and August 2011. Sampling results identified substances at concentrations exceeding health and ecological screening levels including chromium, cadmium, copper, lead, manganese, mercury, nickel, zinc, two PCBs (Aroclors 1248 and 1254), chloroform and methyl tert-butyl ether ("MTBE"). The 2011 sampling results were generally consistent with the results from the November 2003 sampling event, confirming the conclusion of the 2004 IA that the landfill is an ongoing source of pesticides, PCBs, metals and SVOCs to the downstream environment.

30. In a letter dated May 7, 2012, the EPA provided Respondent with a copy of the draft EE/CA and encouraged Respondent to provide comments on the document. The public comment period on the EE/CA commenced on May 16, 2012 and ended on June 16, 2012. During the comment period the EPA received substantive comments from WDFW and the Suquamish Tribe, and letters supporting a response action at the Site from the City of Bremerton and the KCHD. Respondent did not provide comments on the EE/CA during or after the public comment period.

31. The EE/CA concluded that the collapsed culvert restricts the flow of Gorst Creek, causing water to impound upstream of the landfill. Impoundment of water upstream of the landfill may also result in significant downstream flooding events. Large storm events increase the level of impounded water and result in water flooding through the landfill and eventually overtopping the upper elevation of the landfill. Overtopping contributes to landfill instability by eroding the downstream landfill slope as water carries waste from the landfill to the downstream environment. Sudden erosion of the landfill slope could send a surge of waste material downstream, potentially impacting human health and the environment. Among other concerns, a large landfill slide could distribute waste material onto and over State Highway 3 and cause significant erosion of the Highway embankment. Potential impacts to State Highway 3 present a threat to motorists and others using the public highway.

32. In a letter dated March 7, 2014, EPA notified Respondent that it had completed the EE/CA and was preparing to take actions necessary to address conditions at the Site that may present a danger to public health or the environment. The letter reiterated EPA's position that Respondent is liable for conditions at the Site and stated that the EPA was evaluating all options to secure Respondent's participation, including enforcement authorities under section 106 of CERCLA, 42 U.S.C. § 9607, and section 7003 of RCRA, 42 U.S.C. § 6973. The letter requested that Respondent provide a written response indicating whether it intends to conduct or contribute to a response action. Respondent replied to EPA in a letter dated April 3, 2014, acknowledging that it may have disposed of waste at the Site from 1969 to 1970 but stating again that its CERCLA liability at the Site had not been established because EPA had not established a nexus between items disposed of by the Navy and the contamination at issue. Respondent concluded the letter by stating that it did not intend to conduct or contribute to the proposed action.

33. Hazardous constituents present in soils, sediments, surface water and groundwater at the Site and in the downstream environment include: PCBs, DDT, DDE, aldrin, alpha-chlordane, dieldrin, endrine, ketone, gamma-chlordane, heptachlor, 2-methylnaphthalene, napthalene, phenanthrene, bis[2-ehtylhexyl]phthalate, chloroform, MTBE, chromium, cadmium, copper, lead, arsenic, manganese, mercury, nickel and zinc. Exposure to these substances may present an actual or potential harm to human health or the environment through pathways including direct contact with soil and sediments or through ingestion of surface or groundwater. A summary of the health effects associated with some of these substances is appended to this Order as Appendix B and incorporated herein by reference.

34. Since the unpermitted landfill in Gorst Creek Ravine first came to the attention of State and County regulators in 1997, no action has been taken to permanently address the collapsed culvert and unstable landfill slope. The interim measures to protect State Highway 3 implemented by WashDOT in May 1997 were subsequently partially destroyed and have not prevented waste debris from washing into the downstream environment. On December 3, 2007, the Site received 8 inches of rainfall which caused Gorst Creek to impound upstream of the culvert entrance to the landfill and to flow over and through the landfill, causing severe flooding and downstream slope erosion. On December 4, 2007, KCHD inspected the Site and observed a landfill slide of approximately 200 cubic yards of waste material and debris. Waste material was observed in Gorst Creek up to a half-mile downstream of the Site. The landfill slide resulted in a significant amount of waste material and debris blocking the State Highway 3 culvert, requiring WashDOT to use an excavator to clear accumulated debris from the culvert and highway embankment.

35. Until permanent action is taken to address the waste material disposed of at the Site and the collapsed culvert, the Site will continue to present a threat of flooding, slope erosion and instability, and distribution of waste material, debris, and hazardous constituents to the downstream environment, including on and around State Highway 3.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

36. Respondent is a Department of the Executive Branch of the federal government and is subject to the requirements of Section 6001 of RCRA, 42 U.S.C. § 6961.

37. RCRA Section 7003(a), 42 U.S.C. § 6973(a), specifies that when receiving evidence that the past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, EPA may issue an order against "any person" who has contributed or is contributing to such handling, storage, treatment, transportation, or disposal of the solid waste or hazardous waste. "Any person" includes any past or present generator, past or present transporter, or past or present owner or operator.

38. Respondent is a "person" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

39. The term "solid waste" is defined at Section 1004(27) of RCRA, 42 U.S.C. § 6903(27), as "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of Title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 State. 923) [42 U.S.C.A. § 2011 et seq.]."

40. Based on the foregoing Section IV Findings of Fact, EPA has determined that waste generated at the PSNS and disposed of at the Site are "solid wastes" within the meaning of Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

41. Based on the foregoing Section IV Findings of Fact, and pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a), EPA has determined that Respondent contributed to the handling, storage, treatment, transportation or disposal of solid waste at the Site.

42. Based on the foregoing Section IV Findings of Fact, and pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a), EPA has determined that Respondent's handling, storage, treatment, transportation, or disposal of solid waste at the Site may present an imminent and substantial endangerment to health or the environment.

43. The Response Action required by this Order may be necessary to protect health and the environment within the meaning of Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).

VI. ORDER

44. Based on the foregoing Findings of Fact, Conclusions of Law and Determinations, and the full administrative record, IT IS HEREBY ORDERED that Respondent perform all actions required by this Order and comply with all provisions in this Order and any document or plan developed under this Order. Respondent shall fully cooperate with EPA representatives in carrying out all actions required by this Order as well as all provisions in this Order.

VII. WORK TO BE PERFORMED

45. Description of Work to be Performed. The Response Action required by this Order shall re-align Gorst Creek to flow around the landfill by constructing a new ravine and creek channel in the proximity of the southern and western boundary of the Site. The realigned ravine and creek channel shall include vegetative cover and erosion and sediment control features to prevent damage to the stream channel and ravine slopes during normal and peak flows. The realigned ravine and creek channel shall have capacity to convey and contain the 100-year peak storm event within the channel banks without flooding adjacent properties and Washington State Route 3. The new creek channel shall be constructed such that the realigned stream segment provides ecological functions similar to the natural, unaltered segments of Gorst Creek in the vicinity of the project area, including assurance of passage and habitat for native fish and aquatic species. The Response Action required by this Order shall also stabilize the landfill by contouring the steep northern (downstream) and southern (upstream) faces, including the removal of large and protruding waste debris. A cover consisting of a minimum of two feet of clean soil shall be placed on the existing landfill and native vegetation shall be established on the cover for the purpose of preventing erosion or deterioration of the landfill cover. Operation and maintenance of the Response Action will be conducted as appropriate.

46. Site Management Plan. Within forty-five (45) calendar days from the effective date of this Order, Respondent shall submit for EPA review and approval a Site Management Plan ("SMP") for the Site. The SMP shall include a detailed description of all steps to complete the Response Action, including all actions necessary to eliminate or mitigate any immediate threat to human health or the environment. The SMP shall include proposed schedules and deadlines for completing each of the following work requirements:

a. Compilation and review of existing Site data and preparation of a Data Gaps Report that shall, at a minimum, include an assessment of the additional data or information necessary to complete the required Respondent Action and a work plan for addressing any identified data gaps.

b. Subsurface investigations to support a professionally engineered stream channel rerouting design that, at a minimum, includes a geotechnical evaluation and stream hydraulic modeling analysis. These investigations and analyses will be used to define the realignment route for Gorst Creek and for the rerouted stream channel design.

c. Preparation of each of a Preliminary (30%) Design Report, a Draft (60%) Design Report, a Draft Final (90%) Design Report, and a Final (100%) Design Report.

d. Preparation of each of the following: Response Action Work Plan, Contractor Quality Assurance Plan, Health and Safety Plan, Community Relations Plan and Operation and Maintenance Plan.

e. Completion of the Response Action and preparation of a Response Action Completion Report.

In accordance with Section VIII of this Order, EPA will review and either provide comments on the SMP or notify Respondent in writing of EPA's approval, disapproval or modification. Within thirty (30) days of receipt of any EPA comments on the SMP, Respondent shall submit to EPA for approval a revised SMP that addresses or incorporates EPA's comments. EPA will review the revised SMP and notify Respondent in writing of EPA's approval, disapproval or modification. Once approved, the proposed schedules and deadlines contained in the SMP shall be final and incorporated as requirements of this Order.

47. Respondent may request an amendment to the SMP by submitting the proposed amended SMP to EPA for review. No proposed amendments to the SMP, including any changes to the schedules and deadlines, shall be effective and incorporated as requirements of this Order until EPA approves such amendments.

48. Design Report. Respondent shall develop a Design Report that addresses the following Response Action design criteria:

a. Excavation and construction of a realignment channel for Gorst Creek to bypass the landfill in the proximity of the southern and western boundary of the Site. The new excavation will provide for adequate creek channel width, gradient, and average and peak flow capacity. The realignment route will be cleared and grubbed, preserving, as appropriate, large timber, rocks and boulders for use in the stream channel design and/or as armor and habitat restoration materials, and removing from the Site, as appropriate, any such material not used.

b. Stable side slopes for the realigned ravine that are properly vegetated to provide adequate habitat and erosional control. Vegetation will be established along all exposed slopes of the realigned ravine and will include native seed and rooted plantings appropriate to the Site that, once established, will stabilize and protect soils from erosion during all anticipated weather cycles.

c. Stable stream channel for the realigned ravine that includes rock and large woody debris to provide natural habitat for native biota and that provides for passage of native fish species.

d. Re-contouring of the steep upstream and downstream landfill slopes to create stable slopes (maximum grade of 3:1 horizontal to vertical) and to provide for proper drainage off the landfill surface without erosion damage to the landfill surface cover or newly constructed ravine. Removal and proper disposal of any exposed waste debris that may create unstable slopes or lead to erosion damage to the landfill slope.

e. Placement of a surface cover for the landfill consisting of a minimum of 24-inches of clean soil. Removal and proper disposal of any exposed waste debris that may penetrate or damage the surface cover. Permanent vegetation will be established over the surface cover, including along re-contoured landfill slope, as necessary to prevent erosion and maintain the integrity of the cover and slopes. Vegetation will include native seed and rooted plantings appropriate to the Site that, once established, will stabilize and protect soils from erosion during all anticipated weather cycles.

f. Construction of permanent diversion structures or channel blockages upstream and downstream of the landfill to prevent Gorst Creek from reaching the landfill.

g. Permanent abandonment of the culvert pipe beneath the landfill by pressure grouting the culvert with cement grout.

49. Design Report Schedule. The Respondent shall develop the Design Report, subject to review and approval by EPA, according to the following schedule:

h. Respondent shall prepare and submit a Preliminary Design Report that includes an initial design which is approximately thirty percent (30%) complete to EPA within ninety (90) days of Respondent's receipt of EPA's written approval of the SMP.

i. Respondent shall prepare and submit a Draft Design Report that includes a design which is approximately sixty percent (60%) complete to EPA within sixty (60) days of EPA's approval of the Preliminary Design Report pursuant to Section VIII of this Order.

j. Respondent shall prepare and submit a Draft Final Design Report that includes a design which is approximately ninety percent (90%) complete to EPA within thirty (30) days of EPA's approval of the Draft Design Report pursuant to Section VIII of this Order.

k. Respondent shall prepare and submit a Final Design Report to EPA within forty (40) days of EPA's approval of the Draft Final Design Report. The Final Design Report shall include the final Design plans, specifications and performance standards for the Response Action.

50. Response Action Work Plan. Respondent shall prepare a Response Action Work Plan ("RAWP") to implement the Response Action in accordance with the Final Design Report approved by EPA. The RAWP shall be prepared in accordance with this Order and applicable

EPA guidance. Respondent shall submit to EPA a detailed RAWP that includes a schedule for completion of all work. Upon approval or modification by EPA, the RAWP shall be incorporated into and become enforceable under this Order. The RAWP shall include the following:

a. An identification of all necessary permits and applicable regulatory requirements that may impact the Response Action, including seasonal in-stream work windows, and a description of how Respondent will obtain such permits or comply with such regulatory requirements.

b. A description of how Respondent will provide for and maintain traffic passage on Washington State Highway 3 during construction, and access to neighboring business and residences if impacted by construction.

c. A description of how Respondent will provide for and maintain any necessary dewatering and stream by-pass during construction.

d. A description of how Respondent will provide for and maintain temporary erosion and sediment controls to prevent impacts to Gorst Creek during construction.

e. Quality Assurance Project Plan. Respondent shall submit a Quality Assurance Project Plan ("QAPP") to EPA for review and approval. The QAPP shall be prepared in accordance with this Order, the "Uniform Federal Policy for Quality Assurance Project Plans" (March 2005), and applicable EPA guidance.

f. Health and Safety Plan. Respondent shall submit a Health and Safety Plan ("HSP") to EPA for review and approval. The HSP shall be prepared in accordance with this Order and applicable EPA guidance including, without limitation, EPA's Standard Operation Safety Guide. In addition, the HSP shall comply with all applicable Occupational Safety and Health Administration regulations.

g. Community Relations Plan. Respondent shall develop and implement a specific community relations plan for the Site and will make revisions to that plan as necessary and in accordance with EPA guidance.

h. Operation and Maintenance Plan. Respondent shall develop and submit an Operation and Maintenance Plan (O&M Plan) to EPA for review and approval. The O&M Plan shall describe the activities Respondent will undertake to ensure that the realigned stream channel, landfill cover and re-contoured slopes, drainage systems, and vegetative cover are functioning as designed and maintained and repaired as necessary. The O&M Plan shall also address acceptable future uses of the Site and how Respondent intends to implement and enforce appropriate land use restrictions. The O&M Plan shall

include a description and the frequency of Respondent's monitoring activities, and a description of how Respondent will implement any necessary maintenance and repair activities. Respondent shall identify in the O&M Plan and the name, address and telephone number of a point of contact for all O&M activities. The O&M Plan shall cover a period of 30 years following EPA's approval of the Response Action Completion Report.

51. Meetings. The EPA may, at its discretion, schedule meetings with Respondent to discuss the Response Action. These meetings may include other stakeholders including the U.S. Fish and Wildlife Service, the Washington Department of Ecology, the Kitsap County Health Department and the Suquamish Tribe.

52. Monthly Progress Reports. In addition to the other deliverables and reports required by this Order, Respondent shall provide monthly progress reports to the EPA by the 15th day of each month. At a minimum, the monthly progress reports shall (1) describe the actions which have been taken to implement the Response Action and to comply with this Order during the preceding at month, (2) describe the Response Action work planned for the next two months and the schedules relating to such work, and (3) describe all problems encountered, any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

53. Off-Site Shipment of Waste Material. "Waste material" shall mean any "hazardous substance" as defined under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), any pollutant or contaminant as defined under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33), or any "solid waste" as defined under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27). Respondent shall, prior to any off-site shipment of waste material from the Site to an out-of-state waste management facility, provide written notification of such shipment of waste material to the appropriate state environmental official in the receiving facility's state and to EPA's Designated Project Manager. In shipping waste material off-site, Respondent shall comply with all applicable legal requirements, including RCRA's manifest requirements and land disposal restrictions. Before shipping any waste material from the Site to an off-site location:

a. Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the waste material is to be shipped; (2) the type and quantity of the waste material to be shipped; (3) the expected schedule for the shipment of the waste material; and (4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the waste material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the Response Action. Respondent shall provide the information required by Subparagraphs 53.a and 53.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send Waste Material from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

54. Emergency Response and Notification of Releases/Discharges.

a. If any incident or change in conditions during the response action causes or threatens to cause an endangerment to public health or the environment, Respondent shall immediately notify the EPA Project Manager or, in the event of his/her unavailability, the Regional Duty Officer at (206) 553-1263. Respondent shall take action as directed by the EPA Project Manager or Regional Duty Officer and in accordance with all applicable provisions of this Order to prevent, abate or minimize the threat to public health or the environment. .

b. If EPA determines that activities in compliance or non-compliance with this Order have caused, or may cause, a release of a solid waste or may pose a threat to human health or the environment, EPA may direct Respondent to stop further implementation of this Order, or a portion of this Order, for such period of time as EPA determines may be needed to abate any such release or threat and/or undertake any action authorized by law which EPA determines to be necessary.

c. In the event of any release of a hazardous substance or oil from the Site, Respondent shall immediately notify the EPA Project Manager and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA for review and approval within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c).

VIII. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

55. All plans, reports, and other deliverables, required by this Order, shall be submitted by Respondent for EPA's review and approval in accordance with this Section. If requested by EPA, Respondent shall also submit all portions of any report or other deliverable in electronic format. After review of any plan, report, or other item submitted by Respondent for approval pursuant to this Order, EPA shall notify Respondent that it either (a) approves the submission; (b) approves the submission with specified conditions; (c) will modify the submission to cure deficiencies and provide it to Respondent for implementation; (d) disapproves, in whole or in part, the submission and directs that Respondent modify the submission; or (e) any combination of the above.

56. In the event of approval, approval upon conditions, or EPA modification of a plan, report, or submission, Respondent shall proceed to take any action required by the plan, report or other item, as approved or modified by EPA. Following EPA modification or approval of a submittal or portion thereof, Respondent shall not thereafter alter or amend such submittal or portion thereof unless directed by EPA.

57. Upon receipt of a notice of disapproval, Respondent shall, within fourteen (14) calendar days (or such longer time as specified by EPA in this Order or in such notice), correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA.

58. If EPA disapproves a resubmitted plan, report or other item, or portions thereof, EPA may again direct Respondent to correct the deficiencies. Consistent with Paragraph 55 above, EPA shall also retain the right to modify or develop the plan, report or other item, and Respondent shall implement any such plan, report or item as corrected, modified or developed.

59. If upon resubmission a plan, report, or item is disapproved or modified by EPA because of a material defect, Respondent shall be deemed to have failed to submit such plant, report or item timely and EPA may deem any such failure a violation of this Order. Respondent's failure to incorporate EPA's comments may be considered a violation of this Order.

60. All plans, reports and other items submitted to EPA under this Order shall, upon approval or modification by EPA, be incorporated into and enforceable under this Order. In the event EPA approves or modifies a portion of a plan, report or other item submitted to EPA under this Order, the approved or modified portion shall be incorporated into and enforceable under this Order.

61. Respondent is responsible for preparing deliverables acceptable to EPA. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, not the absence of comments, shall be construed as approval by EPA.

IX. QUALIFICATIONS OF RESPONDENT'S PERSONNEL AND AGENTS

62. All work performed by Respondent pursuant to this Order shall be under the direction and supervision of individual(s) who have demonstrated expertise in hazardous waste and site investigations and remediation. Before any work is performed, Respondent shall notify EPA in writing of the name, title, and qualifications of the supervisory personnel of any environmental consultant, contractor, or other corporate entity retained by Respondent to carry out any of the terms of this Order. In addition, Respondent shall ensure that in any circumstance in which a license is required, only licensed individuals shall be retained to perform any work required under this Order.

X. PUBLIC REVIEW OF ADMINISTRATIVE RECORD

63. The Administrative Record supporting the issuance of this Order and any written decisions or determinations made by EPA pursuant to this Order will be available for public review by contacting the EPA Project Manager, Jeffry Rodin, at:

U.S. Environmental Protection Agency, Region 10
1200 6th Avenue, Suite 900
Mail Stop ECL-116
Seattle, Washington 98101
Phone: (206) 553-6709

XI. ON-SITE AND OFF-SITE ACCESS

64. Respondent shall use its best efforts to obtain "Site Access Agreements" to perform work within thirty (30) calendar days of the Effective Date of this order. Any such access agreement shall provide for reasonable access by EPA and its agents (or contractors). In the event that Site Access Agreements are not obtained within the thirty (30) day period, Respondent shall notify EPA, in writing, documenting its best efforts to obtain such agreements. Best efforts, as used in this Paragraph shall include, at a minimum:

a. A certified letter from Respondent to the present owner of such property requesting permission to allow Respondent, EPA, and any of their authorized representative(s) access to such property.

b. The property owner's response, if any.

If, after using its best efforts as provided above, Respondent has failed to obtain voluntary access, EPA may exercise its authority to issue an administrative order providing for such access as may be required or shall refer the access issue to the Department of Justice. Such referral may request a judicial order providing for such access as may be required, including seeking access on behalf of EPA and its designated representatives.

65. Nothing in this Order shall be construed to limit or otherwise affect EPA's right of access and entry pursuant to any applicable laws and regulations, including RCRA and CERCLA.

66. Nothing in this Order shall be construed to limit or otherwise affect Respondent's liabilities and obligations to perform the directed actions, including actions beyond the Site boundary, notwithstanding lack of access. EPA may determine that additional measures must be taken to address releases beyond the Site boundary if access to off-site areas cannot be obtained.

67. Respondent shall make available to EPA for inspections, copying or photographing, all records, files, photographs, documents or any other writing, including monitoring and sampling

data (including raw data, upon EPA request) that pertain to any work undertaken pursuant to this Order.

XII. RETENTION OF RECORDS

68. Respondent shall preserve for a minimum of ten (10) years after termination of this Order all data, records and documentation in its possession or in the possession of its divisions, officers, supervisors, employees, agents, contractors, successors, and assigns which relate in any way to this Order or to solid or hazardous waste management at the Site. Respondent shall make such records available to EPA at its request. Respondent shall also maintain records pertaining to the work being performed pursuant to this Order and shall make such records available to EPA for inspection upon request.

XIII. PROJECT MANAGERS

69. The EPA designates as its Project Manager for this Response Action:

Jeffry Rodin, On-Scene Coordinator
U.S. EPA Region 10
1200 6th Avenue, Suite 900
Mail Stop ECL-116
Seattle, WA 98101
Phone: (206) 553-6709

EPA reserves the right to change the designated Project Manager at any time, and will provide notice to Respondent should such change occur.

70. Within ten (10) calendar days after the effective date of this Order, Respondent shall designate a Project Manager and the name of at least one individual as an alternate who may function in the absence of the designated Project Manager. Respondent's Project Manager shall be responsible for overseeing the implementation of this Order. Respondent may change its designated Project Manager after providing notice of such change to EPA, including the appropriate contact information for the new designated Project Manager.

XIV. NOTICES

71. For purposes of this Order, all written communications, notices or submissions required by this Order shall be directed to a person specified by each party. EPA hereby designates its Project Manager to receive all notices required under this Order.

72. Within ten (10) calendar days after the effective date of this Order, Respondent shall designate a person to receive such written communications, notices, or responses to submissions required by this Order and shall provide a mailing address for such person.

73. Any notice, report, certification, data presentation, or other document submitted by Respondent pursuant to this Order which discusses, describes, demonstrates, or supports any finding or makes any representation concerning Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a duly authorized representative of Respondent. A person is a "duly authorized representative" only if: (1) the authorization is made in writing; (2) the authorization specifies either an individual or position having responsibility over the work to be performed pursuant to this Order, and (3) the written authorization is submitted to the Project Manager designated by EPA, in accordance with Section XIII of this Order. The certification required by this Paragraph shall be in the following form:

> I certify that, to the best of my knowledge and belief, the information contained in this written certification and in any documents accompanying this certification is true, accurate and complete.
>
> In making this statement, I have not made an independent review of all statements contained therein and have relied in good-faith on information, statements, and representations furnished to me by employees or contractors of the U.S. Navy. Based on my inquiry of the person or persons (or the supervisors of such persons) directly responsible for gathering the information contained in this written certification and in any documents accompanying this certification, this document is, to the best of my knowledge and belief, true accurate and complete. I am aware that there are significant potential penalties for submitting materially false information, including the possibility of fines and imprisonment for knowing violations.
>
> Signature:
> Name:
> Title:

XV. RESERVATION OF RIGHTS

74. EPA expressly reserves, without limitation, all of its statutory and regulatory powers, authorities, rights, remedies and defenses, both legal and equitable, which it may have. EPA may exercise its authority under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 *et seq*., to undertake removal or remedial actions.

75. EPA expressly reserves all rights that it may have, including the right to disapprove of work performed by Respondent pursuant to this Order, to require Respondent to correct any work disapproved by EPA, and to direct Respondent to perform tasks in addition to those required pursuant to this Order.

76. This Order shall not be constructed as a covenant not to sue, or as a release, waiver, or limitation or any claims, rights, remedies, defenses, powers and/or authorities which EPA has

under RCRA, CERCLA, or any other statutory, regulatory or common law authority of the United States.

77. This Order shall not limit or otherwise preclude EPA from taking any additional legal action against Respondent should EPA determine that any such additional legal action is necessary or warranted.

78. Notwithstanding compliance with this Order, Respondent is not released from any claims EPA may have for costs, and EPA reserves the right to seek reimbursement from Respondent for any such costs it incurs. Compliance with this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable local, state, or federal laws and regulations.

79. EPA reserves the right to seek to perform any portion of the work required herein or to take any additional response actions EPA deems necessary to protect health or welfare or the environment.

XVI. OTHER APPLICABLE LAWS

80. Respondent shall undertake all actions required by this Order in accordance with the requirements of all applicable local, state, and federal laws and regulations. Respondent shall obtain all required permits or approvals as necessary to perform the work required by this Order.

81. Any reports, plans, specifications, schedules, or other submissions and attachments required by this Order are upon written approval by EPA incorporated into this Order. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order.

82. No informal advice, guidance, suggestions or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent shall be constructed as relieving Respondent of its obligations to obtain written approval, if and when required by this Order.

XVII. OPPORTUNITY TO CONFER

83. Within ten (10) calendar days of Respondent's receipt of this Order, if the Navy wishes to confer with the EPA, either through submission of written materials or through a direct meeting, the Assistant Secretary of the Navy must file a written request addressed to the EPA Assistant Administrator for the Office of Enforcement and Compliance Assurance (OECA) seeking an opportunity to confer with the EPA Assistant Administrator for OECA. The opportunity to confer with the Administrator provided by Section 6001(b) of RCRA has been delegated to the Assistant Administrator of OECA. The written request should be served on the EPA Assistant Administrator with a copy to the Director of EPA's Federal Facilities Enforcement Office and

the Regional Counsel for EPA Region 10. A letter requesting a direct meeting should specifically identify those issues which the Respondent wishes the EPA Assistant Administrator to consider.

84. If Respondent chooses a direct meeting, following EPA's receipt of the request of a direct meeting, the EPA Assistant Administrator for OECA will contact the Assistant Secretary of the Navy to convene a meeting as soon as possible.

85. After a direct meeting or receipt of written materials, the EPA Assistant Administrator for OECA will issue a written decision with appropriate instructions regarding the finality of this Order. This decision shall be made part of the Administrative Record and shall be effective within five (5) calendar days of Respondent's receipt of the EPA decision.

XVIII. ENFORCEMENT

86. The failure of Respondent to comply with any provision of this Order shall be considered a violation of this Order.

87. In the event of any action filed under Section 7002(a) of RCRA alleging any violation of this Order, it shall be presumed that this Order, including those provisions which address record keeping, reporting and schedules of compliance, are requirements, standards, and conditions, and are thus enforceable under Section 7002(a) of RCRA.

88. Nothing herein shall preclude EPA from taking any additional enforcement actions, and/or such other actions as it may deem necessary for the abatement or prevention of an imminent danger to public health or the environment arising from conditions at the Site. Nor shall EPA be precluded from taking any such other enforcement actions as EPA may deem necessary based on additional information or under other environmental laws.

XIX. TERMINATION

89. This Order and all of its terms and provisions shall remain in effect until all of the activities called for by this Order are completed and Respondent is so notified in writing by EPA. Such notice shall be signed by the Director, Office of Environmental Cleanup, Region 10. Respondent may request that EPA Region 10 provide Respondent with such notice, and shall supply EPA with such information, including certifications, as EPA may specify.

XX. GENERAL PROVISIONS

90. Nothing in this Order constitutes a satisfaction or release from liability with respect to any conditions or claims arising as a result of past, current or future operations, ownership or use of the Site by Respondent, its agents, officers, supervisors, directors, successors or assigns.

91. Nothing in this Order affects any right, claim, interest, defense, or cause of action of EPA with respect to Respondent or any third parties.

XXI. NOTICE OF NON-LIABILITY OF EPA

92. EPA shall not be deemed a party to any contract involving Respondent and relating to activities at the Site, and EPA shall not be liable for any claim or cause of action arising from or on account of any act, or the omission of Respondent, its officers, employees, contractors, receivers, trustees, agents or assigns, in carrying out the activities required by this Order.

XXII. NOTICE OF INTENT TO COMPLY

93. Respondent shall notify EPA's Project Manager in writing of whether it intends to comply with this Order by no later than fifteen (15) calendar days after the effective date of this Order. Respondent shall be deemed in violation of this Order if it fails to provide written notification to EPA's Project Manager of Respondent's intent to comply within the time period noted above.

XXIII. ANTI-DEFICIENCY ACT

94. Nothing set forth in this Order shall require Respondent to violate the Anti-Deficiency Act, 31 U.S.C. § 1341 *et seq*.

XXIV. MODIFICATION

95. If EPA determines that modification to the work specified in approved work plan(s) or other reports developed pursuant to this Order is necessary to achieve and maintain the Performance Standards or to carry out and maintain the effectiveness of the remedy set forth in the Final Decision, EPA may require that such modification be incorporated in the appropriate work plan(s) or other reports. Respondent shall implement any work required by any modifications incorporated in the work plans or other reports developed pursuant to this Order.

XXV. EFFECTIVE DATE

96. This Order shall become effective within eleven (11) calendar days of Respondent's receipt of this Order if no conference with the EPA Assistant Administrator is requested pursuant to Section XVII, above. If a conference with the EPA Assistant Administrator is requested in the time and manner provided in Section XVII above, this Order shall become effective within five (5) calendar days of Respondent's receipt of the EPA Assistant Administrator's decision.

IT IS SO ORDERED:

Richard Albright, Director
Office of Environmental Cleanup
Region 10

9 Oct 2014
DATE

ATTACHMENT A

GORST CREEK LANDFILL SITE MAP

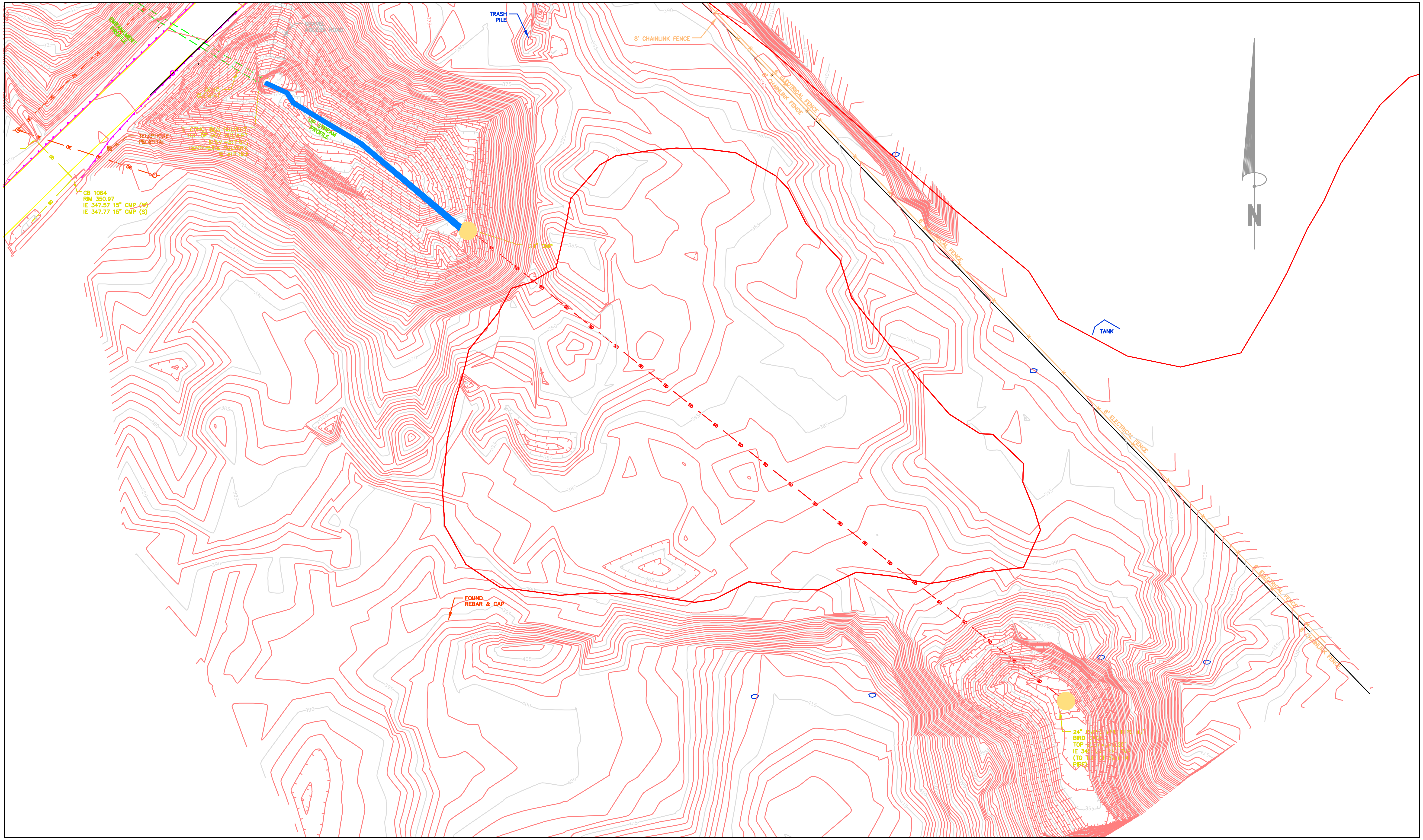
Soil Boring Locaitons
G Series Samples; GC01S
L Series Samples
Existing well
Outfall location
24-inch corrugated metal pipe under the landfill
Gorst Creek - Bremerton Auto Wrecking landfill boundary

Gorst Creek Landfill

Port Orchard, Washington

Map Projection: NAD 1983 UTM Zone 10N Meter
Map Scale: 1: 2,000
0 25 50 100 150 200 250
Feet
1 in = 167 ft

Figure 1-4
Sample Location Map
July - August 2011



Outfall location

Existing 24-inch corrugated metal pipe

Gorst Creek - Bremerton Auto Wrecking landfill boundary

Stream Profile

Culvert

Gorst Creek Landfill

Port Orchard, Washington

N W E S

SCALE IN FEET 0 40 80 120

Map Projection: NAD 1983 Washington State Plan North Feet

Figure 1-2B
Site Conditions 2011
(Gorst Creek EE/CA)
January 2012

APPENDIX B. HEALTH EFFECTS OF CONTAMINANTS FOUND AT BREMERTON AUTO WRECKING LANDFILL

Hazardous wastes and hazardous constituents present in the soils, sediments, surface waters, and groundwater at include cadmium, copper, lead, manganese, mercury, nickel, and zinc and two Polychlorinated biphenyls (PCBs): Aroclor 1248 and Aroclor 1254. These substances have the following health effects.

a. Cadmium is a solid waste when disposed, a hazardous waste carrying the waste code D006, and a hazardous constituent. Exposure to Cadmium can cause pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia. The acute (short-term) effects of cadmium in humans through inhalation exposure consist mainly of effects on the lung, such as pulmonary irritation. Chronic (long-term) inhalation or oral exposure to cadmium leads to a build-up of cadmium in the kidneys that can cause kidney disease. Cadmium has been shown to be a developmental toxicant in animals, resulting in fetal malformations and other effects, but no conclusive evidence exists in humans. An association between cadmium exposure and an increased risk of lung cancer has been reported from human studies, but these studies are inconclusive due to confounding factors. Animal studies have demonstrated an increase in lung cancer from long-term inhalation exposure to cadmium. EPA has classified cadmium as a Group B1, probable human carcinogen.

b. Copper exposure can cause irritation to the eyes, nose, pharynx; nasal septum perforation; metallic taste; and dermatitis.

c. Lead is a solid waste when disposed, a hazardous waste carrying the waste code D008, and a hazardous constituent. Lead is classified as a probable human carcinogen by EPA's Integrated Risk Information System (IRIS). Exposure to lead can cause headache, irritability, reduced memory, disturbed sleep, and mood and personality changes. High or repeated exposure may damage nerves causing weakness and poor coordination in the arms and legs.

d. Exposure to manganese can cause behavioral changes and other nervous system effects, which include movements that may become slow and clumsy. Other less severe nervous system effects such as slowed hand movements have been observed in some workers exposed to lower concentrations in the work place. Exposure to high levels of manganese in air can cause lung irritation and reproductive effects.

e. Mercury is a hazardous waste carrying the waste code D009 and a hazardous constituent. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. Short-term exposure to high levels of metallic mercury vapors may cause effects

including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

f. The most common harmful health effect of nickel in humans is an allergic reaction. Approximately 10-20% of the population is sensitive to nickel. People can become sensitive to nickel when jewelry or other things containing it are in direct contact with the skin for a long time. Once a person is sensitized to nickel, further contact with the metal may produce a reaction. The most common reaction is a skin rash at the site of contact. The skin rash may also occur at a site away from the site of contact. Less frequently, some people who are sensitive to nickel have asthma attacks following exposure to nickel. Some sensitized people react when they consume food or water containing nickel or breathe dust containing it. People working in nickel refineries or nickel-processing plants have experienced chronic bronchitis and reduced lung function. These persons breathed amounts of nickel much higher than levels found normally in the environment. Workers who drank water containing high amounts of nickel had stomach ache and suffered adverse effects to their blood and kidneys. The Department of Health and Human Services (DHHS) has determined that nickel metal may reasonably be anticipated to be a carcinogen and that nickel compounds are known human carcinogens. The International Agency for Research on Cancer (IARC) has determined that some nickel compounds are carcinogenic to humans and that metallic nickel may possibly be carcinogenic to humans. The EPA has determined that nickel refinery dust and nickel subsulfide are human carcinogens.

g. Harmful effects from zinc generally begin at levels 10-15 times higher than the amount needed for good health. Large doses taken by mouth even for a short time can cause stomach cramps, nausea, and vomiting. Taken longer, it can cause anemia and decrease the levels of your good cholesterol. Inhaling large amounts of zinc (as dusts or fumes) can cause a specific short-term disease called metal fume fever.

h. The primary targets of PCBs, including Aroclor 1248 and Aroclor 1254, are the endocrine and nervous systems. PCB exposure during prenatal and early childhood development has been associated with low birth weight (31-38), neurobehavioral developmental delays, cognitive deficits, changes in production of thyroid hormones, and altered reproductive system development in males and females (reviewed in (53-56). PCB exposure has also been associated with chloracne (a specific type of often severe and persistent skin lesion), with liver damage in humans, and with liver cancer in experimental animals.